

## REMARKS

Applicants thank the Examiner for the Office Action of June 22, 2009. This Amendment is in full response thereto. Thus, Applicants respectfully request continued examination and allowance of the application.

Claims 12-22 are pending in this application.

### Double Patenting

Claims 12-22 is provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-49 of U.S. Patent No.: 6,910,879 (Dugue, et al.) in view of U.S. Patent No. 6,422,041 (Simpson, et al.). Claim 22 has been canceled. With respect to claims 12-21, Applicant respectfully traverses because the Examiner has not provided a legally sufficient case of obviousness-type double patenting.

A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See MPEP II B 1; see also, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); and *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). When considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279, 23 USPQ2d 1839, 1846 (Fed. Cir. 1992).

In the instant rejection, the Examiner has improperly used the disclosure of the base reference Dugue, et al. as prior art. The Examiner has failed to compare the scope of the base reference claims to that of the claims of the present application.

Rather, the Examiner compares the scope of the **disclosure** of the base reference to that of the claims of the present application.

Thus, the rejection should be withdrawn.

#### **Claim Rejections Under 35 U.S.C. § 112:**

Claims 12-22 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 has been canceled. With respect to claims 12-21, Applicant has amended claim 12 to recite “a central primary jet” instead of “the central primary jet”, thereby mooting the lack of antecedent basis. Thus, the rejection should be withdrawn.

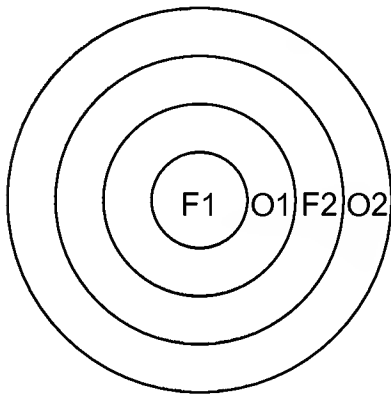
#### **Claim Rejections Under 35 U.S.C. § 102**

Claims 12 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6,422,041 (Simpson, et al.). Claim 22 has been canceled. With respect to claim 12, Applicant respectfully traverses because Simpson, et al. fails to disclose, teach, or suggest all of the limitations of the claims, in particular, a central primary jet injected in a center of a jet of fuel.

Claim 12 is directed to a method of fuel combustion, in which a jet of fuel and at least two jets of oxidizer are injected, the first jet of oxidizer, called the primary jet, being injected so as to be in contact with the jet of fuel and to generate a first incomplete combustion, the gases originating from this first combustion still comprising at least a portion of the fuel, and the second jet of oxidizer being injected at a distance from the jet of fuel in such a way as to combust with the portion of the fuel present in the gases originating from the first combustion. The the primary jet of oxidizer is divided into two primary jets: a) a first primary jet of oxidizer, called a central primary jet, injected in the center of the jet of fuel, b) a second primary jet of oxidizer, called a sheathing primary jet, injected coaxially around the jet of fuel.

Thus, the central primary jet is injected in a center of the jet of fuel while the sheathing primary jet is injected coaxially around the jet of fuel.

In contrast, Simpson, et al. discloses a completely different arrangement. With reference to the diagram below, Simpson, et al. discloses a first portion of fuel (F1) being injected as a centrally located jet, a first portion of oxygen (O1) being injected annularly and coaxially around the central fuel jet, a second portion of fuel (F2) being injected annularly and coaxially around the first portion of oxygen, and a second portion of oxygen (O2) being injected annularly and coaxially around the second portion of fuel.



In this arrangement, the Examiner considers the first portion of oxygen to correspond to the claimed central primary jet, the second portion of fuel to correspond to the claimed jet of fuel, and the second portion of oxygen to correspond to the claimed sheathing primary jet.

However, in the above arrangement, the first portion of oxygen is not injected in the center of the second portion of fuel. Rather, it is the first portion of fuel that is injected in the center of the second portion of fuel. The first portion of oxygen is actually injected in an annulus just interior to the second portion of fuel. Applicant respectfully asserts that one of ordinary skill in the art would have considered the center of the second portion of fuel to be the common axis to which each of the first and second portions of fuel and first and second portions of oxygen are coaxial to.

The cross-sectional space in which the first portion of oxygen is injected does not overlap or contain the center.

Thus, the rejection should be withdrawn.

**First Claim Rejection Under 35 U.S.C. § 103:**

Claims 13-16, 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over USPN 6,422,041 (Simpson, et al.). Applicant respectfully traverses for the reason given above, namely: Simpson, et al. fails to disclose, teach or suggest a central primary jet of oxidant injected in a center of a jet of fuel. Thus, the rejection should be withdrawn.

**Second Claim Rejection Under 35 U.S.C. § 103:**

Claims 1-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Pub. No.: 2004/0157178 (Issued USPN 6,910,879) (Dugue, et al.) in view of USPN 6,422,041 (Simpson, et al.). Applicant respectfully traverses for the reason given above, namely: Simpson, et al. fails to disclose, teach or suggest a central primary jet of oxidant injected in a center of a jet of fuel. Applicant also traverses because Dugue, et al. is disqualified as prior art for use in a rejection under 35 U.S.C. § 103(a). Dugue, et al. is disqualified because it and the instant application were, at the time of the invention of the instant application, owned by or subject to an obligation of assignment to L'Air Liquide, Société Anonyme à Directoire et Conseil de Surveillance pour l'Étude et l'Exploitation des Procédés Georges Claude.

Thus, the rejection should be withdrawn.

**CONCLUSION**

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the examiner believe a telephone call would expedite the prosecution of the application, he/she is invited to call the undersigned attorney at the number listed below.

It is not believed that any fee is due at this time. If that belief is incorrect, please debit deposit account number 01-1375. Also, the Commissioner is authorized to credit any overpayment to deposit account number 01-1375.

Respectfully submitted,

Date: **September 22, 2009**

/Christopher J. Cronin/  
Christopher J. Cronin  
Registration No. 46,513

Air Liquide  
2700 Post Oak Blvd., 18<sup>th</sup> Floor  
Houston, Texas 77056  
Phone: 302-286-5525  
Fax: 713-624-8950